

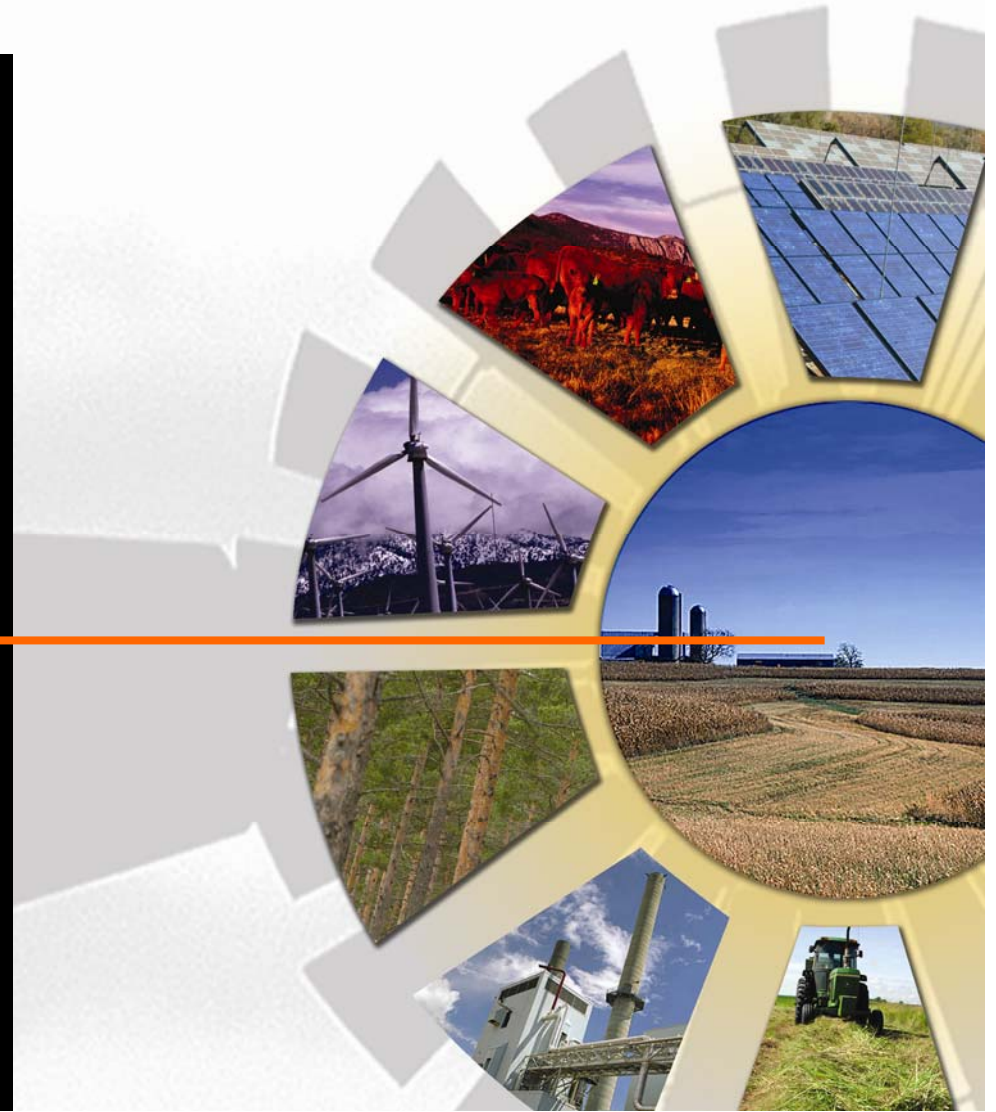
25x'25 WORK GROUP

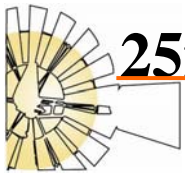
American Agriculture: **Powering the Future**

Presented to

**Natl. Association of State
Energy Officials**

February 7, 2006
Washington, DC

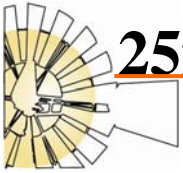




Search for New Energy Solutions

- Nonpartisan alliances
- Seeking changes in U.S. energy policy
- Focusing on economic, security and environmental challenges
- Working to forge a consensus on a new energy future





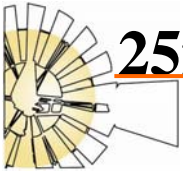
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Energy:

The Linchpin of Our Economy

- Fundamental to our prosperity
- Contributes to our quality of life
- Historically has been abundant and affordable

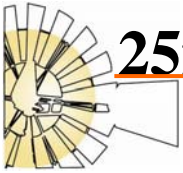




Fossil based energy systems are not sustainable

- World oil reserves are limited in supply and located in volatile parts of the world
- Dependence on foreign oil is increasing

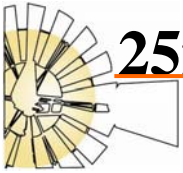




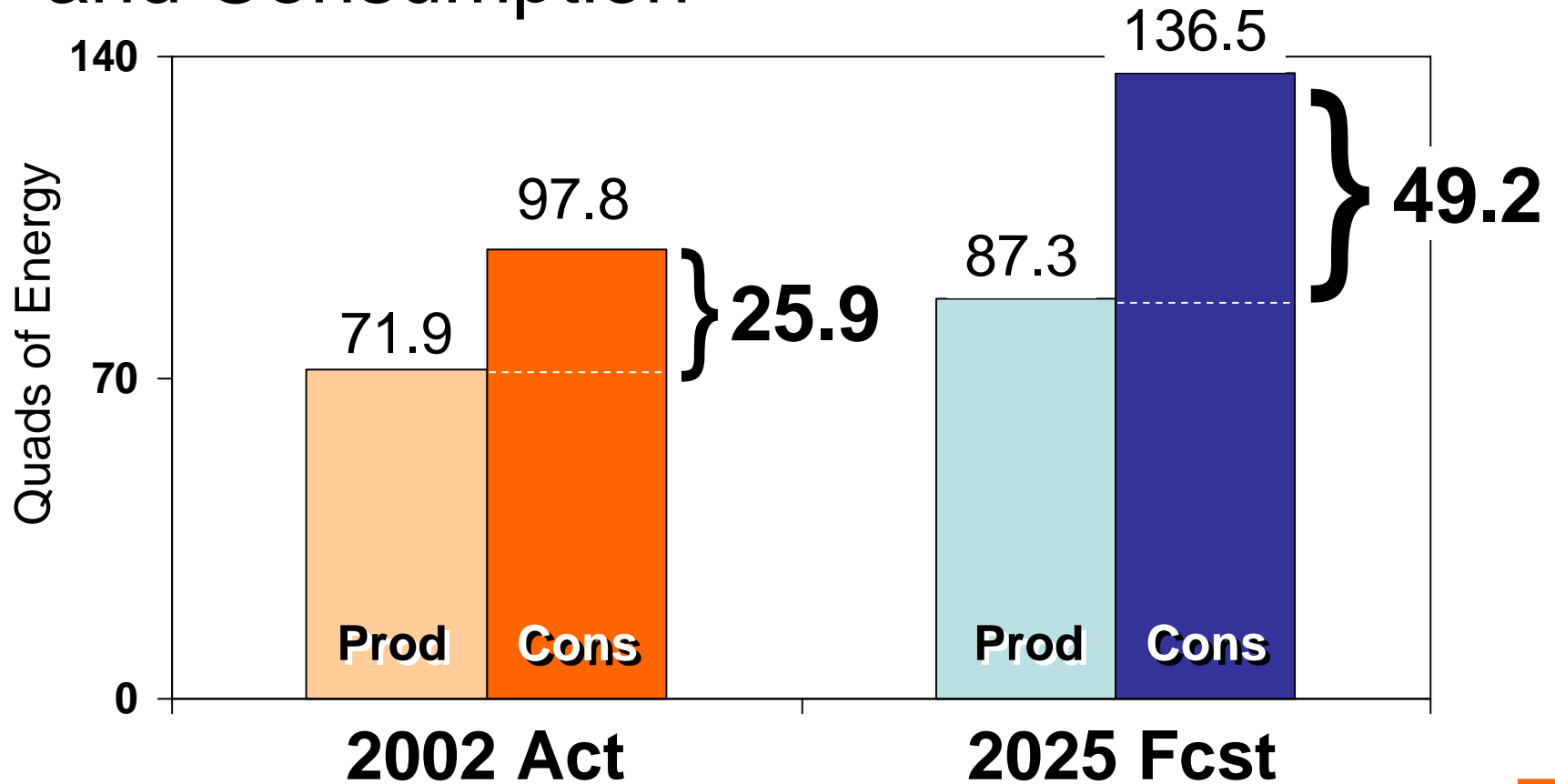
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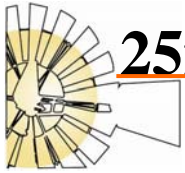
- Costs of oil, natural gas and electricity are skyrocketing
- Emissions from burning of fossil fuels are impacting the environment





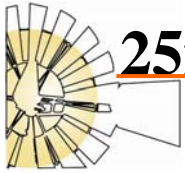
Total Domestic Energy Production and Consumption





Ag Energy Project

- Formed in Spring 2004
 - Organized to explore ag's role in energy production
 - Phase 1-creating a vision
 - Phase 2-building an ag energy alliance
 - Phase 3-implementing strategy
-



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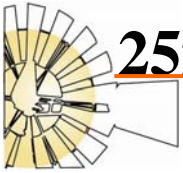
Phase One:

Development of a draft vision

Core questions:

- What role can the farm sector play?
- How big a contribution?
- What has to happen?

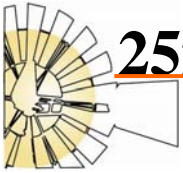




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Step One: Examined ag's current role

- ethanol
 - biodiesel
 - biomass/biopower
 - waste and ag residue
 - wind
 - solar
-

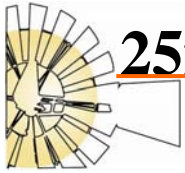


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Our Conclusions:

- Agriculture can play a major role in helping the nation achieve energy independence.
- An enormous and historic opportunity is on the horizon.
- It is time for the ag sector to come together and work collaboratively to capitalize on these opportunities.



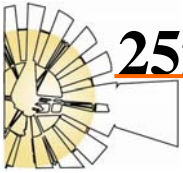


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Our Vision:

By the year 2025, renewable energy from the nation's farms, ranches and forests will comprise 25 percent of the total energy consumed in the United States.

25x'25

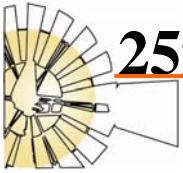


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Is the
25% goal
for renewable
energy
by 2025

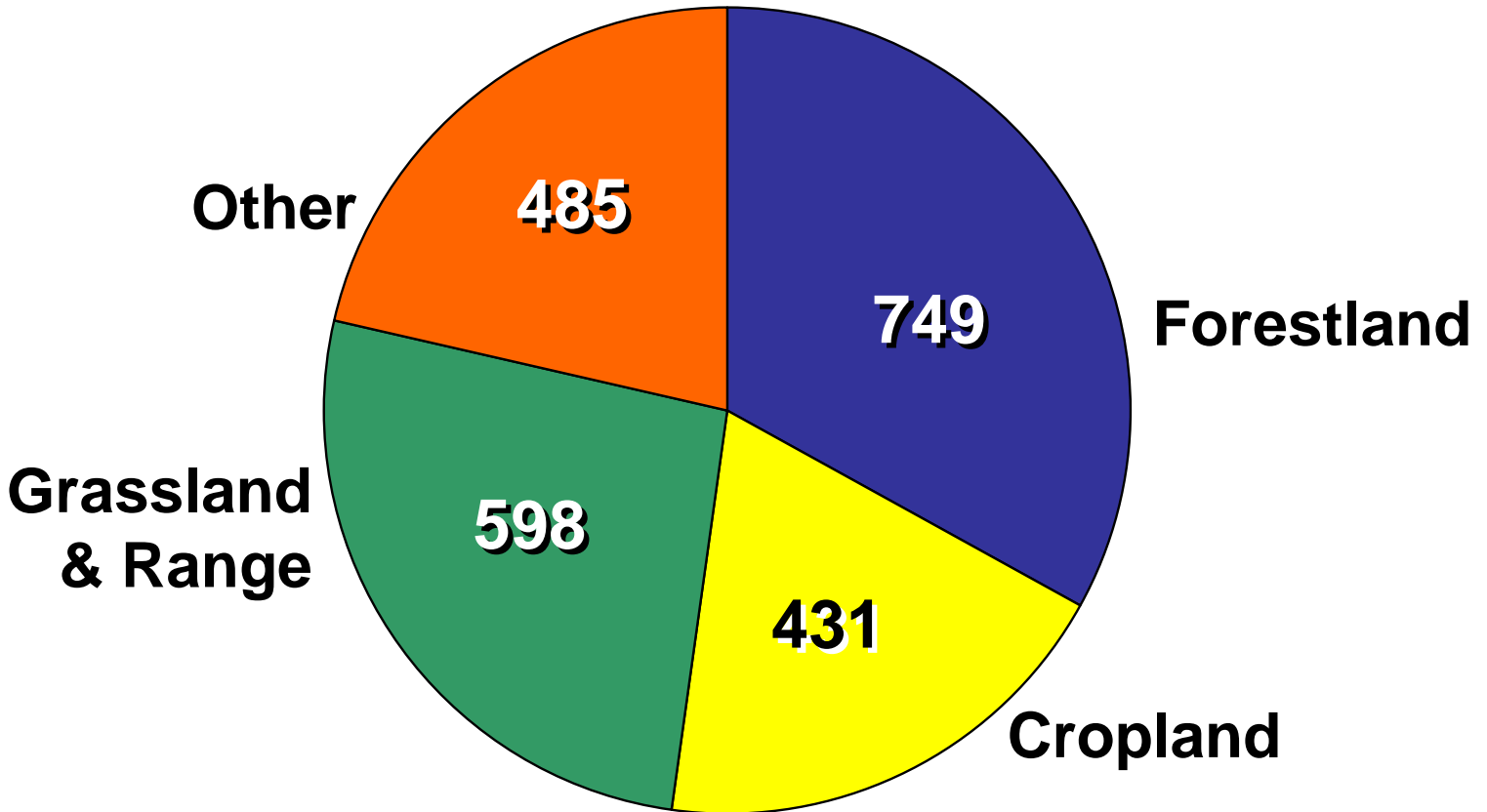
REALISTIC?



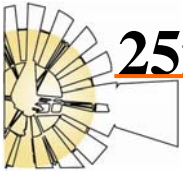


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Total Landmass U.S.
2263 Million Acres

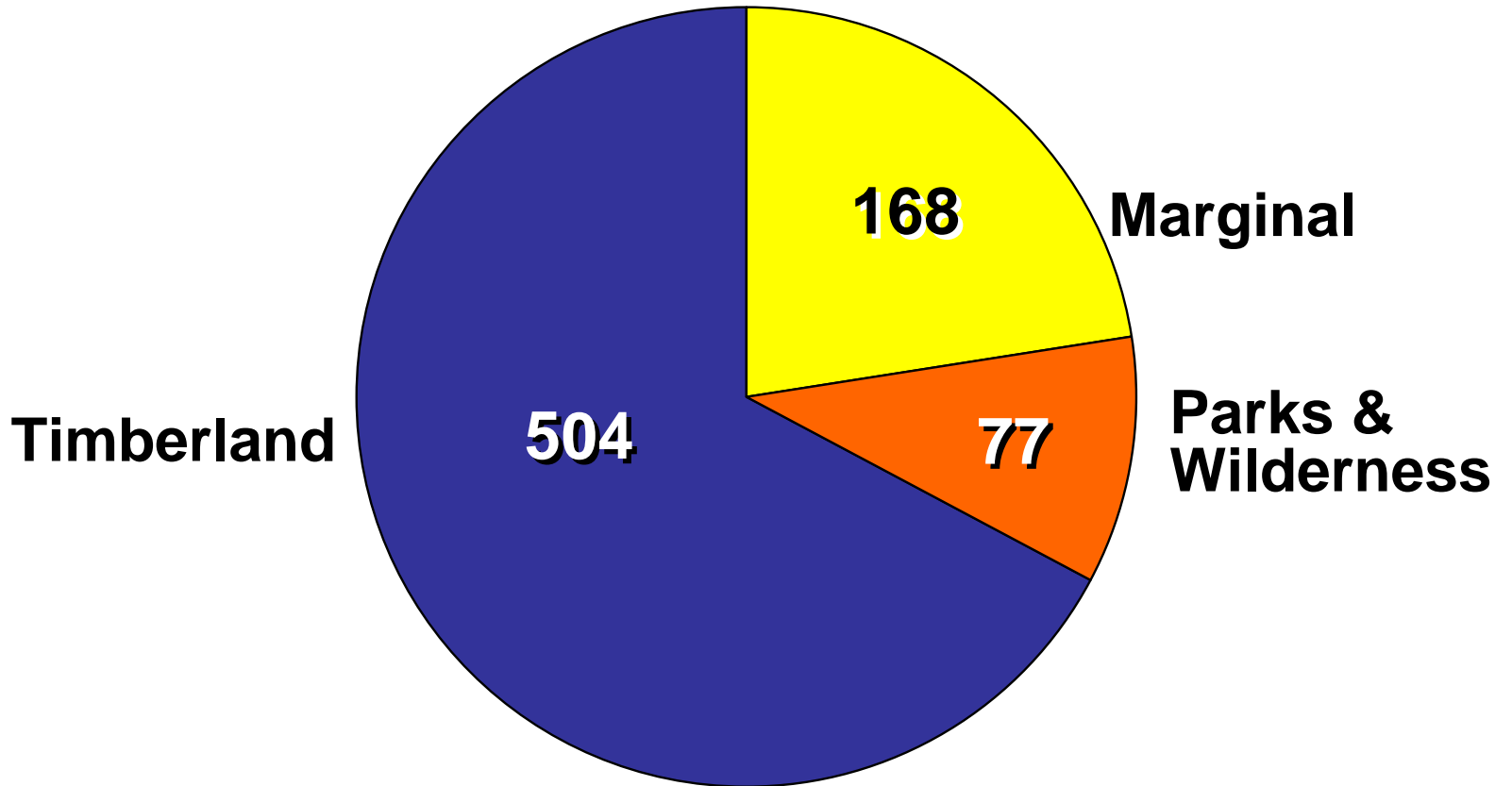


(All values in millions of acres)

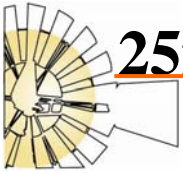


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Forestland 749 Million Acres

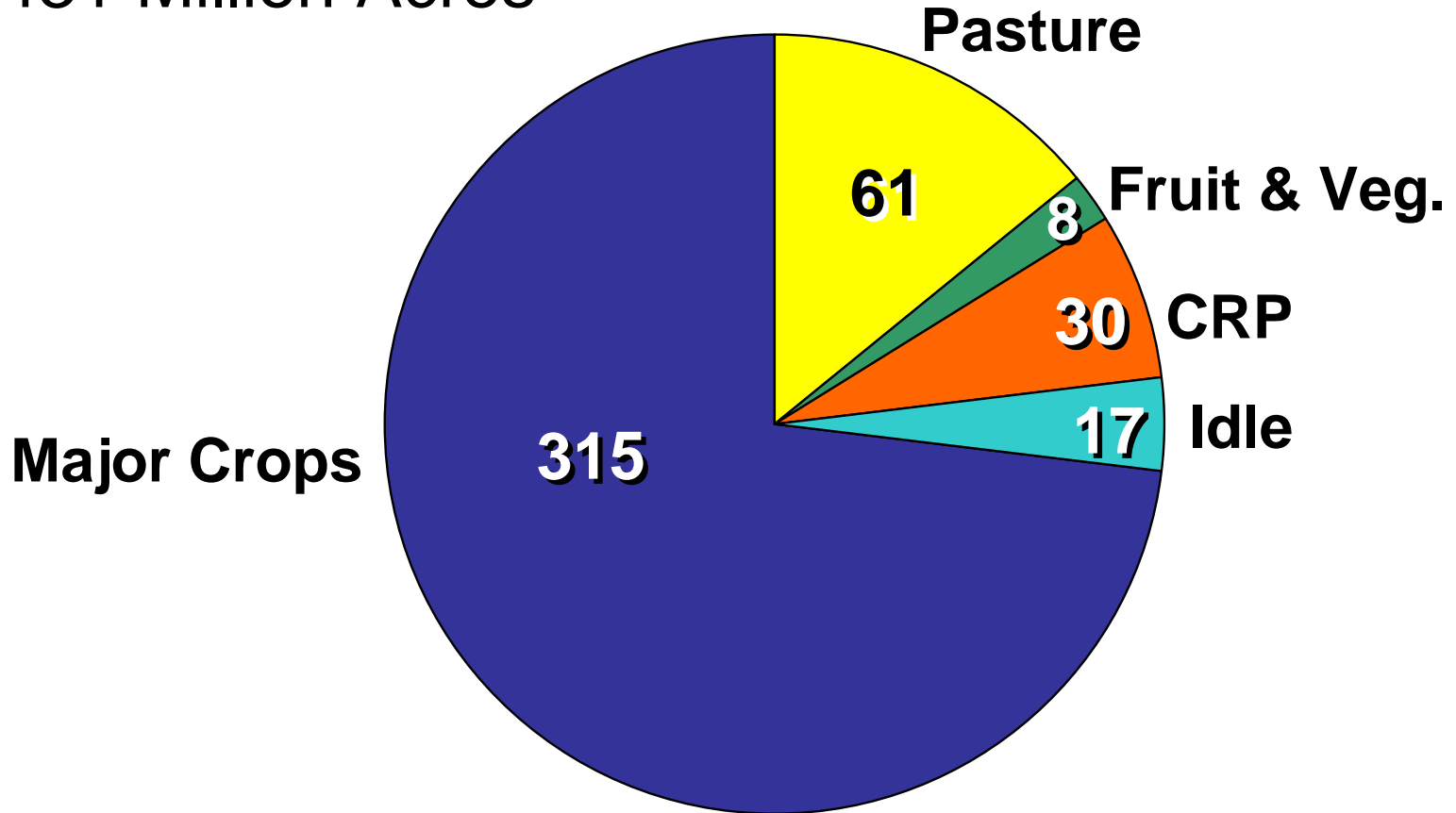


(All values in millions of acres)

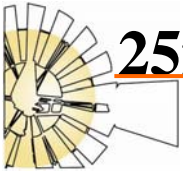


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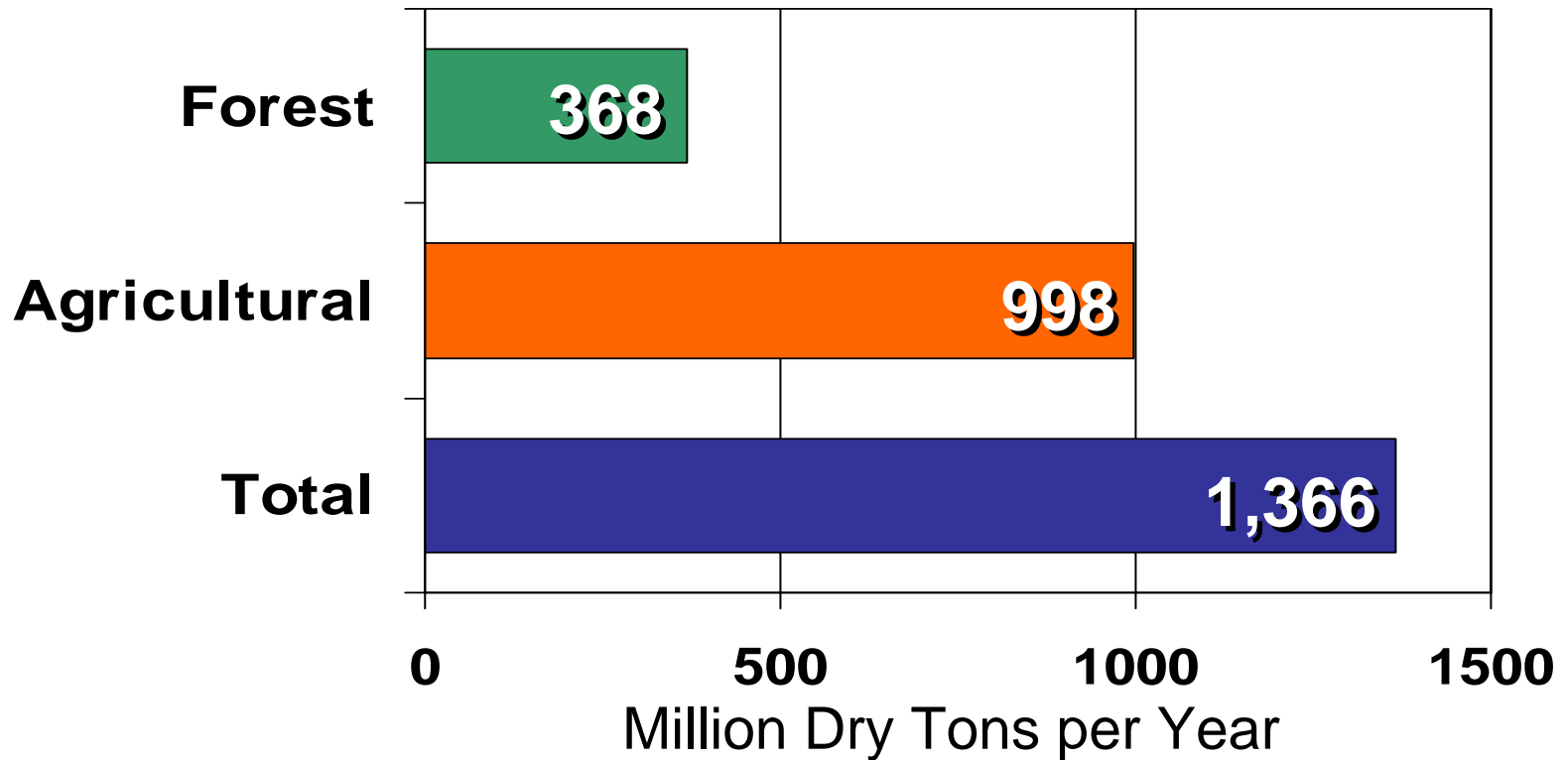
Cropland
431 Million Acres



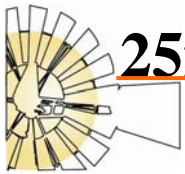
(All values in millions of acres)



Biomass Potential



Source: April 2005; DOE / USDA Report

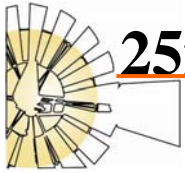


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Biomass is the Feedstock for:

- Ethanol
- Biogases
- Biodiesel
- Direct fired equipment

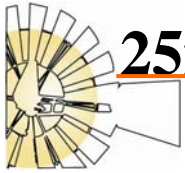




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Wind / Solar Potential



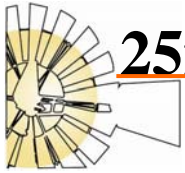


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We will meet this goal by:

- Producing transportation fuels
- Harnessing wind energy
- Converting biogas emissions
- Capturing solar energy
- Providing biomass for generating heat and power



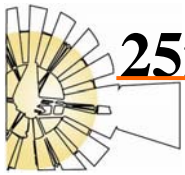


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This is a food, feed, fiber and fuel vision,
that is economically viable for our society.

With emerging technology we can produce
multiple commodities.

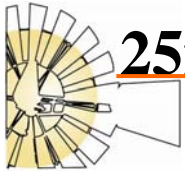




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What's in it for agriculture and forestry?

- Increased farm income
 - Added value uses
 - Alternative enterprises
 - More productive uses of marginal lands
 - Assist in resolution of air, water and soil quality problems
 - Reduced reliance on government payments
 - Enhanced rural economies
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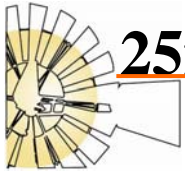


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Phase Two: Building an ag and forestry energy alliance

- Reaching out to over 100 organizations
- Seeking ag and forestry leaders and energy champions





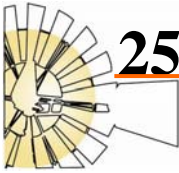
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Current Areas of Focus:

- Alliance formation
- Economic analysis of 25 x '25
- Corporate Leadership Council
- Interfacing with utilities
- Communication outreach
- Strengthen political support
- Implementation planning





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Article Last Updated: 8/29/2005 03:18 AM

editorial

State leaders should embrace "25 by 25"

The effort, backed by farm groups and enviro organizations, would have agriculture produce 25 percent of the total energy used in the U.S. by 2025

DenverPost.com

News that Panda Energy will build an ethanol plant near Yuma should be seen in the larger picture of solving America's energy problems.

Thanks to new technologies, agriculture could start producing not only the nation's food but also some of our fuel and electricity.

Panda's plant is an excellent example of how farm-made energy could reap environmental as well as economic benefits. The end product, ethanol, is a clean-burning liquid fuel that can be mixed or sometimes substituted for gasoline. The ethanol will be made from corn, but the energy used to cook it into usable fuel will come from cow manure. So one renewable fuel will be used to make another renewable fuel - all of it grown on Colorado's Eastern Plains, not imported from the politically volatile Middle East.

The facility will save the equivalent of 1,000 barrels of oil per day, making it one of the nation's most energy-efficient ethanol facilities. By itself, the plant can't possibly quench the nation's seemingly insatiable thirst for liquid fuel, now about 140 billion gallons a year. But it shows one way the nation can start weaning itself off foreign energy supplies.

Indeed, there's a push to have agriculture produce 25 percent of the total energy used in the country by 2025. Appropriately called "25 by 25," the effort is backed by farm groups, environmental organizations and progressive energy companies. The effort doesn't promote just one technology but an array of energy options: Ethanol from crops and farm wastes; diesel from soybeans or used restaurant grease; natural gas from manure; electricity from wind turbines and solar panels.

The technologies should be evaluated on their economic and environmental merits. But taken together, they could help solve intertwined policy problems: improving national security, curbing global warming and providing reliable, affordable energy.

Agriculture as energy source would help rural areas, which long have had stagnant economies and shrinking populations. The Panda plant, for instance, will provide 40 to 60 good paying jobs - a windfall for Yuma, population 3,500.

But it's only a small part of a very big, potentially bright picture. Given the many opportunities in making from farms, Colorado's elected leaders and business groups should join the "25 by 25" push.

Omaha World-Herald

JOHN GOTTSCHALK, Publisher
LARRY KING, Executive Editor FRANCIS L. PARTSCH, Editorial Page Editor
DEANNA J. SANDS, Managing Editor GEITNER SIMMONS, Deputy Editorial Page Editor

Energy from the farm

American agriculture may, in the future, be as deeply involved in energy production as it now is in growing food for the nation and the world.

Agriculture may contribute to stable, predictable power supply.

ed from the methane in livestock waste already has proved viable on a small scale but could be ratcheted up. And the potential for biomass has hardly

been tapped. Some of the possible benefits from extending agriculture further into energy production, Hahn said, include providing an additional market for corn, sugarbeets, switchgrass and other crops. Environmental benefits could accrue: cleaner air, he suggested, and a decreased risk of water pollution.

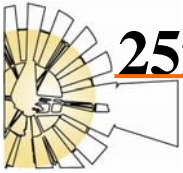
The program could help "replace dependency on OPEC with home-grown energy, increasing our energy security," Hahn said. While doing that, he added, it could increase farm income, reduce dependency on government programs and provide economic benefits to revitalize rural communities.

The nation needs bold and forward-looking ideas. The future of energy is uncertain; the continued supply of affordable petroleum products is even more so. The sooner agriculture can contribute to a stable and predictable energy future, the better.

Agriculture Secretary Mike Johanns heard about this potential from Omahan Richard C. Hahn, retired president and CEO of Farmers National Co. and a member of the Maryland-based Ag Energy Work Group. The organization and its Agricultural Energy Alliance are pressing for expanded use of farm resources in energy production with their "25 by '25" program.

The goal is to have 25 percent of the nation's energy produced by agricultural sources by 2025 without compromising production of food and fiber. Hahn spoke at the 2007 Farm Bill Forum sponsored by Johanns last month during Husker Harvest Days in Grand Island.

Ethanol and biodiesel production already is providing an energy source and stretching gasoline. The vision of Hahn's group goes further. Farmers could capitalize on the wind and solar energy by providing sites, he suggested. Power generat-



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25 x '25 Building Blocks

Enabling Federal
and State Policy

Research,
Development
& Demonstration

Communications
and Education

Appropriations

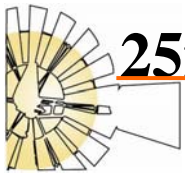
Coalitions
and Outreach

Commercialization
of Technology--
new & emerging

Access to Capital

Infrastructure

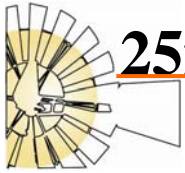




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Next Steps:

- Help form and support state level 25x'25 alliances
 - Build an overwhelming level of public support for 25x'25 vision
 - Invite other renewable energy advocates to join our national alliance
 - Seek adoption of 25x'25 goal as national policy
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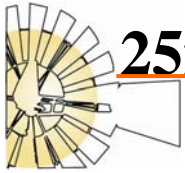
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Conclusions:

We have the technology, capacity and leadership to offer new energy solutions.

These solutions will enhance farm income and strengthen rural communities.





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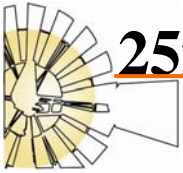
We Need Your:

- Involvement
- Insight
- Expertise
- Leadership skills



Please join us in bringing the
vision of 25 X '25 to life.





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American
Agriculture:
**Powering
the Future**

25x'25

